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FIG. 1

FIG. 2

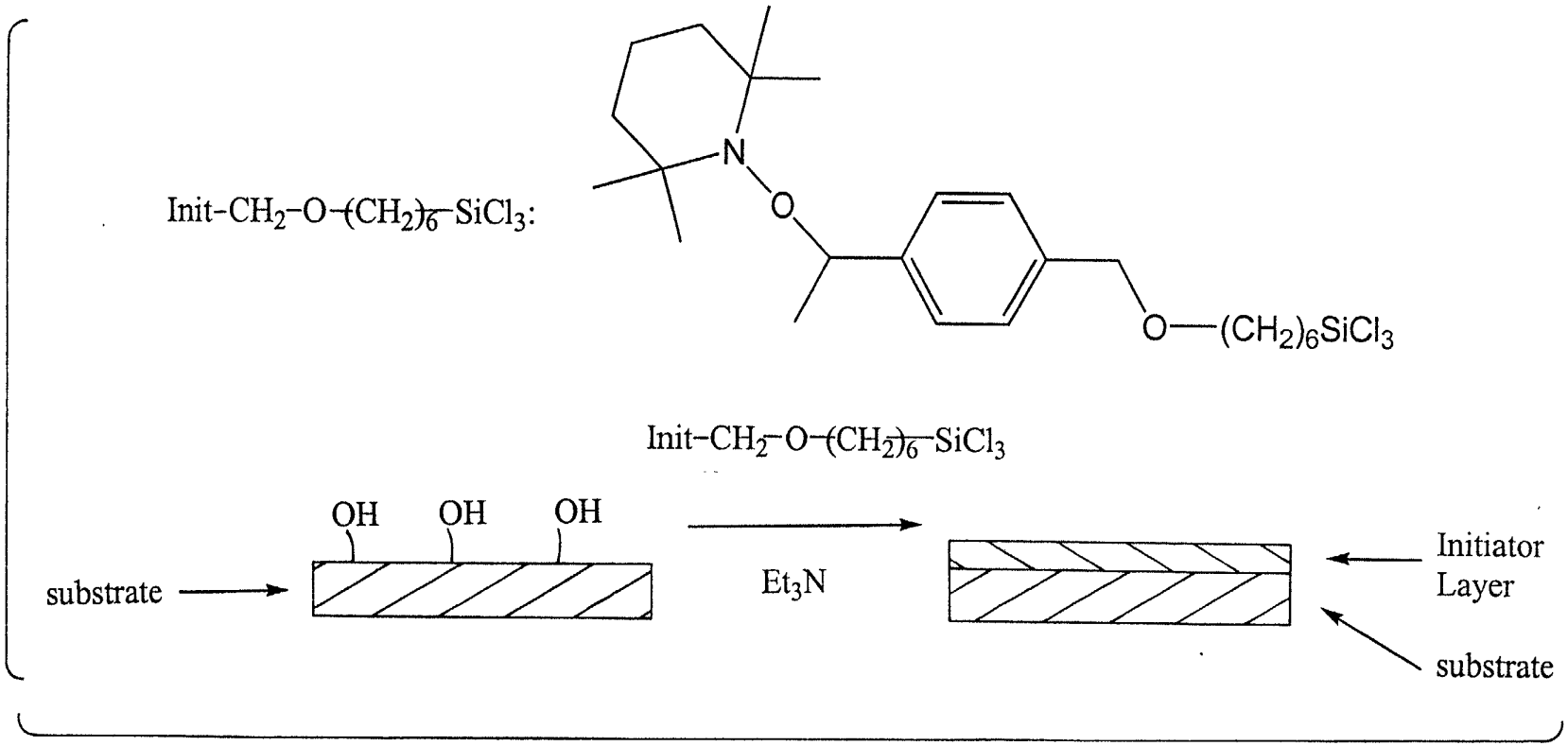

Init-CH2-O-(CH2)6-SiCl3:
N
O
O—(CH2)6SiCl3
Init-CH2-O-(CH2)6-SiCl3
OH
OH
OH
substrate
Et3N
Initiator Layer
substrate

FIG. 3

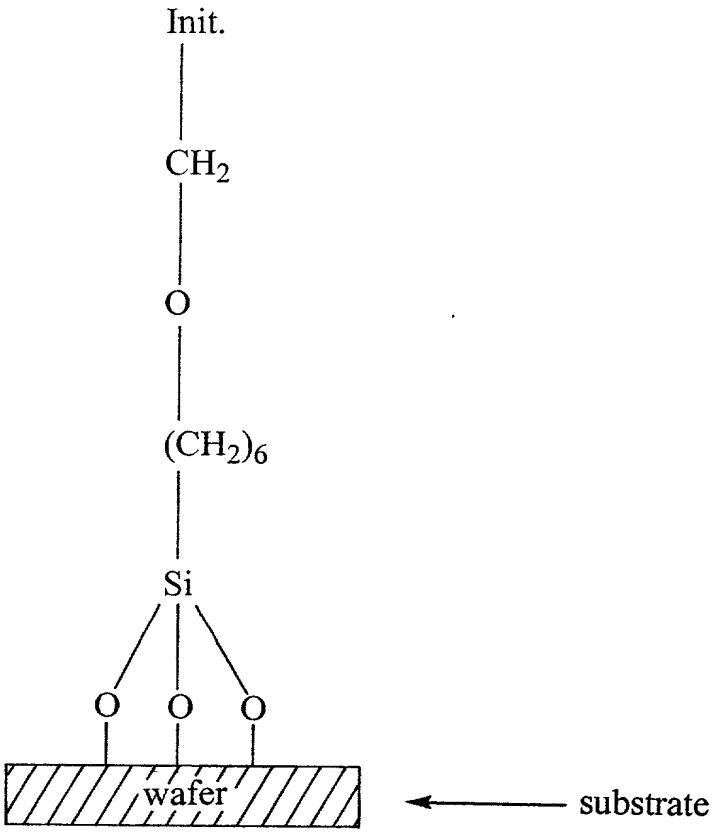


FIG. 4

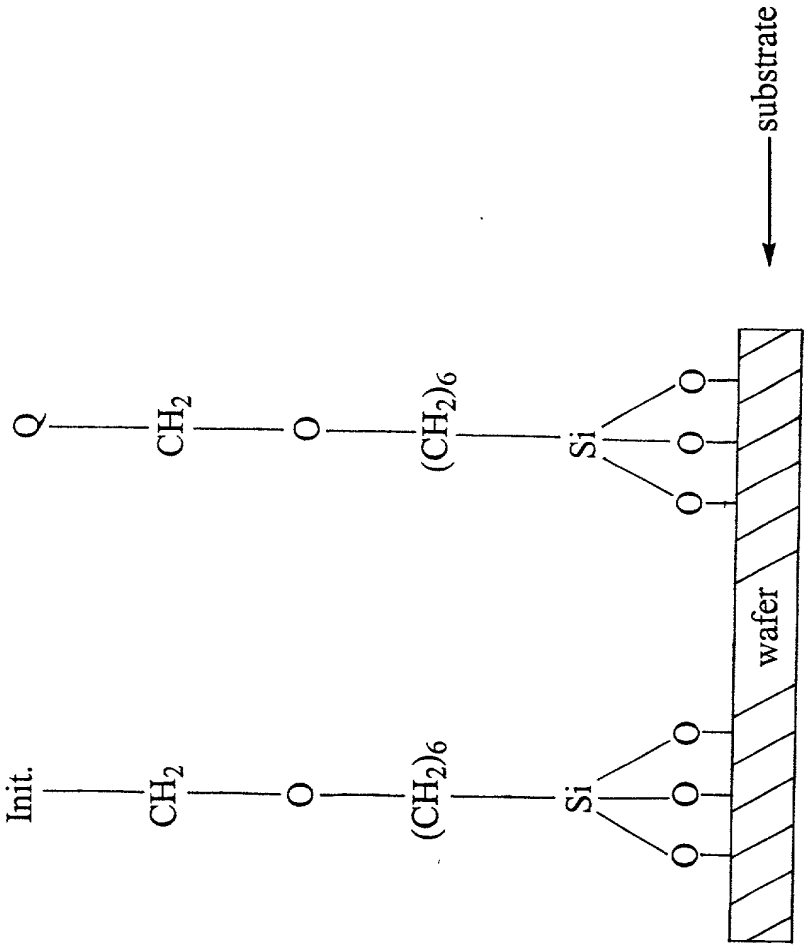


FIG. 5

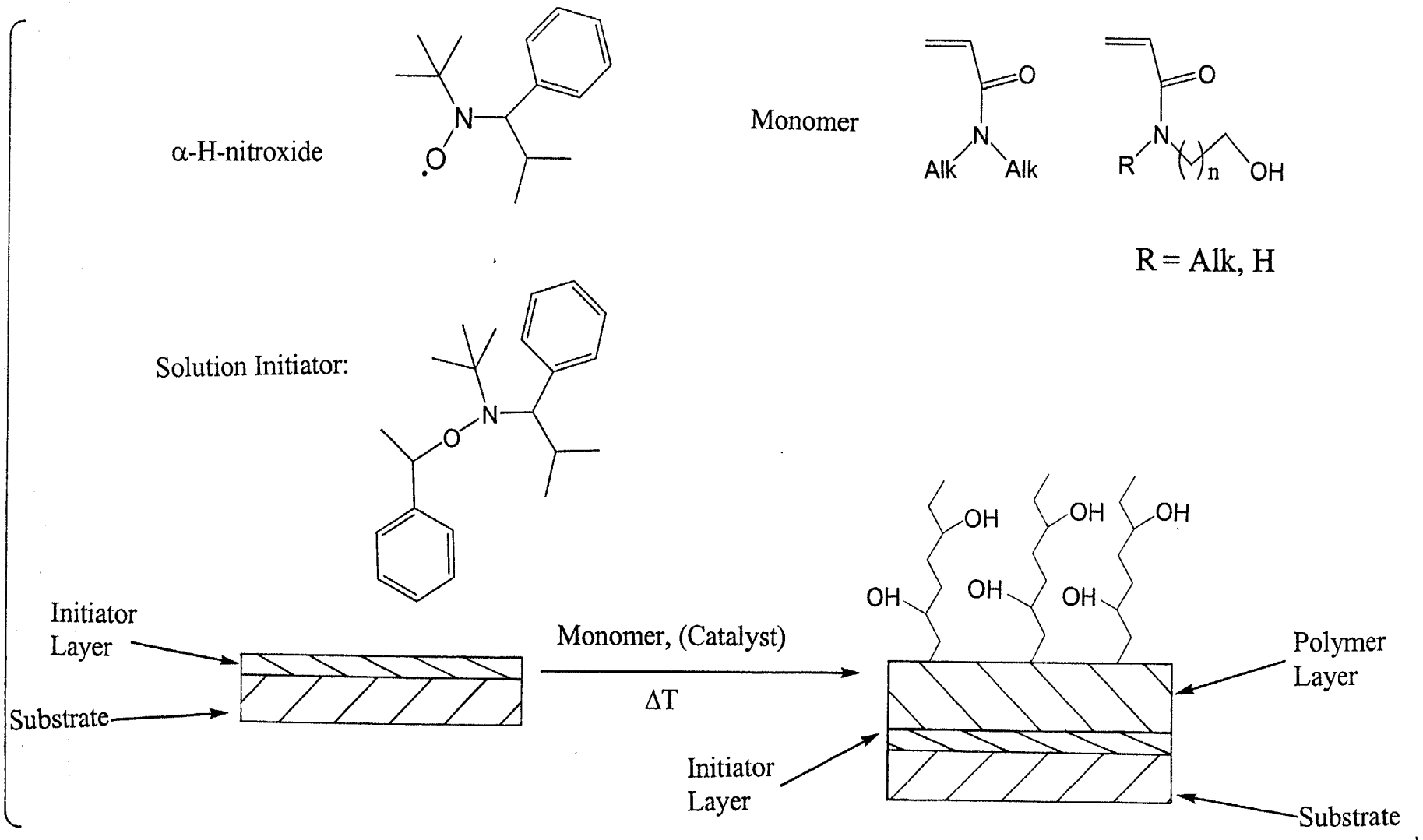

α-H-nitroxide
Monomer
Alk
Alk
R
n
OH
R = Alk, H
Solution Initiator:
Initiator Layer
Substrate
Monomer, (Catalyst)
ΔT
OH
Polymer Layer
Initiator Layer
Substrate

FIG. 6

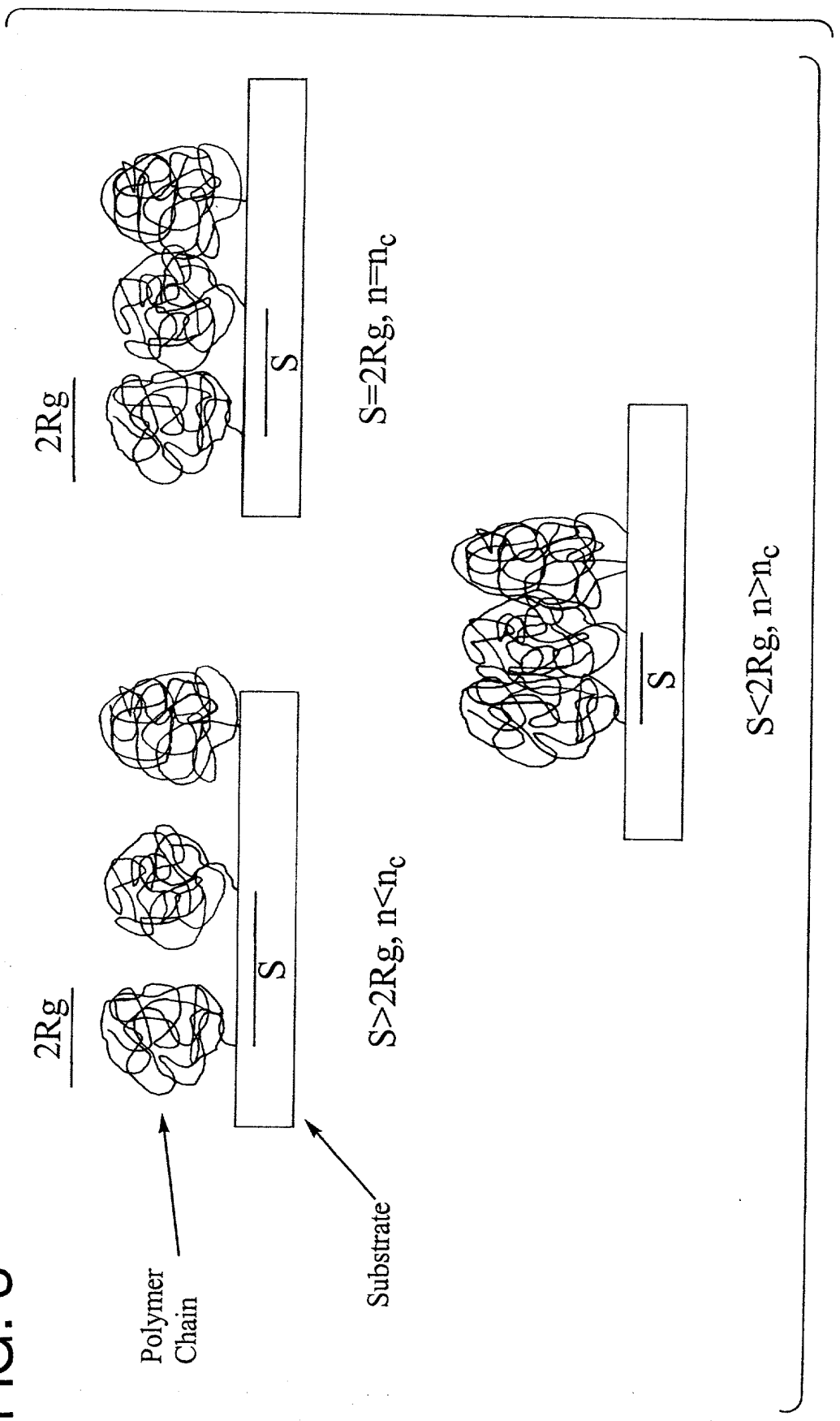
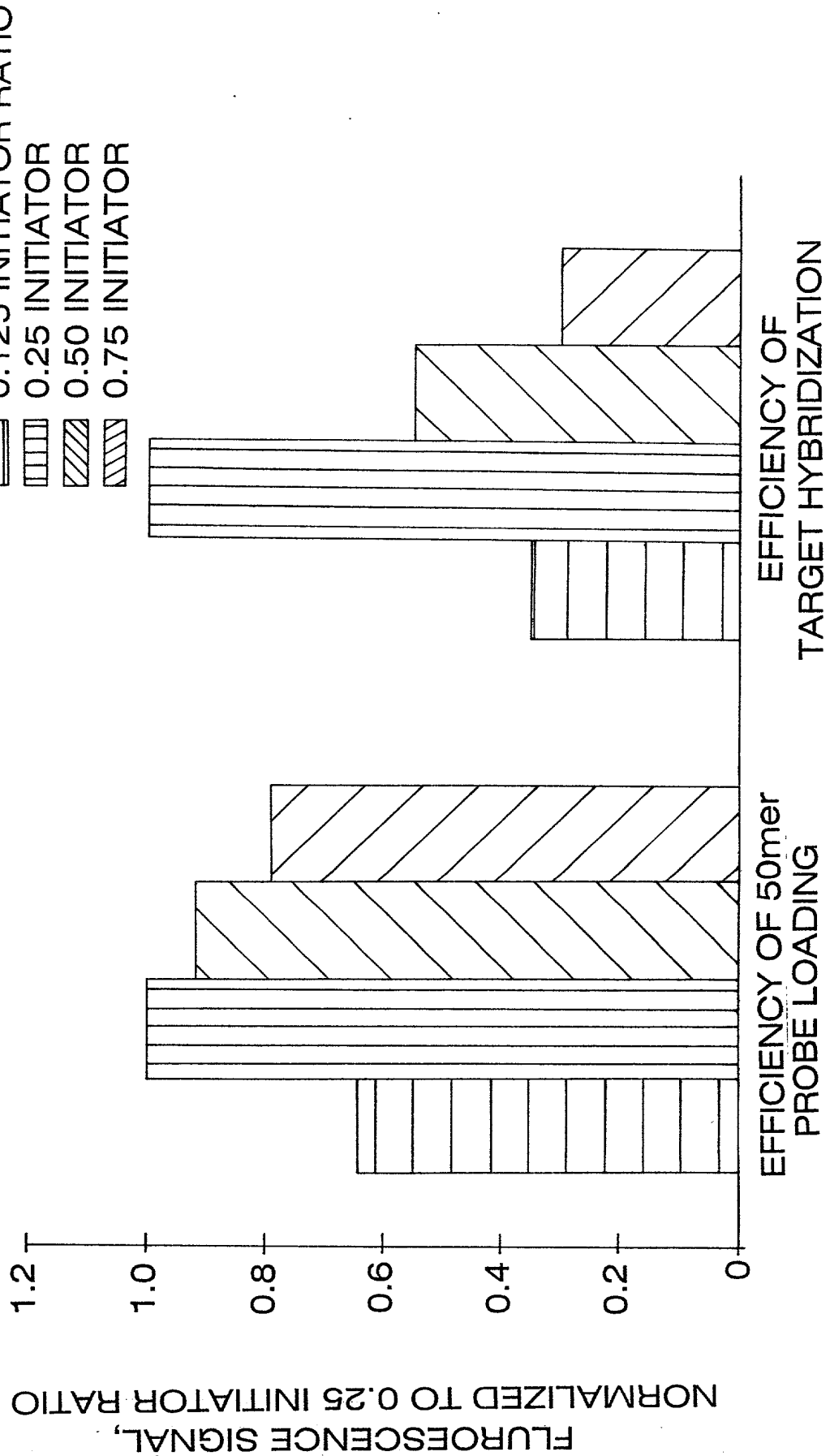

2Rg
S
S=2Rg, n=n_c
2Rg
S
S>2Rg, n<n_c
S
S<2Rg, n>n_c
Polymer Chain
Substrate

FIG. 7


LOADING, HYBRIDIZATION EFFICIENCY VS. CHAIN DENSITY
0.125 INITIATOR RATIO
0.25 INITIATOR
0.50 INITIATOR
0.75 INITIATOR
FLUROESCENCE SIGNAL, NORMALIZED TO 0.25 INITIATOR RATIO
1.2
1.0
0.8
0.6
0.4
0.2
0
EFFICIENCY OF 50mer PROBE LOADING
EFFICIENCY OF TARGET HYBRIDIZATION